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| EXAMINER |
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CERVETTI, DAVID GARCIA

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| ART UNIT | PAPER NUMBER |
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2136

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/24/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/731,029 | Applicant(s) GARIADOR ET AL. | |
| | Examiner David G. Cervetti | Art Unit 2136 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/10/03, 1/25/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending and have been examined.

Specification

2. The disclosure is objected to because of the following informalities: "OSI", "IPSec" (page 1), "RF", "MAC" (page 2). These terms have not been defined.

Appropriate correction is required.

3. The use of the trademark "802.11" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

4. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (page 3). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Objections

5. Claim 19 is objected to because of the following informalities: "based on the a impersonation". Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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7. Claims 15 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure is directed to a IEEE 802.11-type network.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. **Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomsen (US Patent 6,745,333).**

Regarding claim 1, Thomsen teaches

- a method for detecting impersonation based attacks at a wireless node of a wireless communication network (**abstract**), comprising the steps of:
- a) providing an intrusion detection module with a copy of original data frames transmitted by the wireless node over a wireless interface (**col. 12, lines 33-67**);
- b) detecting at the intrusion detection module incoming data frames received over the wireless interface (**col. 12, lines 50-67, col. 13, lines 1-28**); and
- c) recognizing an impersonating attack when the information in the copy differs from the information in the incoming data frames (**col. 10, lines 50-67, col. 11, lines 1-33**).

Regarding claim 10, Thomsen teaches

- an impersonation detection system for a wireless node of a wireless communication network, the node for transmitting original data frames over a wireless interface (**abstract**) comprising:
- an intrusion detection module for correlating the original data frames with incoming data frames received over the air interface (**col. 12, lines 33-67**); and
- connection means between the wireless node and the intrusion detection module for providing the intrusion detection module with a copy of the original data frames (**col. 12, lines 50-67, col. 13, lines 1-28**).

Regarding claim 17, Thomsen teaches

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- a wireless node for a wireless network (**abstract**) comprising:
- means for transmitting outgoing data frames over a wireless interface (**col. 12, lines 33-67**);
- an intrusion detection module for correlating the outgoing data frames with incoming data frames received from the air interface (**col. 12, lines 50-67, col. 13, lines 1-28**); and
- a secure link between the wireless node and the intrusion detection module for providing the intrusion detection module with a copy of the outgoing data frames (**col. 10, lines 50-67, col. 11, lines 1-33**).

Regarding claim 2, Thomsen teaches wherein step a) comprises transmitting the copy over a secure link established between the wireless node and the intrusion detection module (**col. 1, lines 50-67**).

Regarding claim 3, Thomsen teaches wherein the copy comprises only management frames (**col. 11, lines 50-67, col. 12, lines 1-18**).

Regarding claim 4, Thomsen teaches wherein the copy includes a summary of the outgoing data frames (**col. 12, lines 33-67**).

Regarding claim 5, Thomsen teaches wherein the summary of the outgoing data frames comprises frames that allow statistical comparisons (**col. 12, lines 50-67**).

Regarding claim 6, Thomsen teaches wherein the summary comprises the number of the outgoing data frames transmitted over a time interval (**col. 12, lines 33-67**).

Regarding claim 7, Thomsen teaches wherein the summary comprises the types of the original data frames (**col. 11, lines 50-67, col. 12, lines 33-67**).

Regarding claim 8, Thomsen teaches wherein step b) comprises monitoring all wireless channels allocated to the wireless node and extracting the incoming data frames received over all the wireless channels (**col. 15, lines 30-67**).

Regarding claim 9, Thomsen teaches wherein step c) comprises: correlating the original data frames with the incoming data frames for detecting an inconsistency between the frames; and upon detection of the inconsistency, further processing the received data frames for qualifying the impersonating attack (**col. 10, lines 50-67, col. 11, lines 1-33**).

Regarding claim 11, Thomsen teaches wherein the intrusion detection module comprises: a first receiving unit for receiving the copy; an antenna for capturing the incoming traffic received on all transmission channels allocated to the wireless node; a second receiving unit for detecting the incoming data frames from the incoming traffic; and a data processing unit for correlating the copy with the incoming data frames and generating a impersonation detection signal (**col. 9, lines 1-15, col. 12, lines 50-67, col. 13, lines 1-28**).

Regarding claim 12, Thomsen teaches wherein the intrusion detection module further comprises means for qualifying an intrusion attack based on the impersonation detected signal (**col. 10, lines 50-67, col. 11, lines 1-33**).

Regarding claim 13, Thomsen teaches wherein the connection means comprises, when the intrusion detection module resides away from the wireless node: a

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transmitting unit on the wireless node, for transmitting the copy to the intrusion detection module; a secure link for connecting the wireless node with the intrusion detection module; and a receiving unit on the intrusion detection module for receiving the copy **(col. 15, lines 30-67)**.

Regarding claim 14, Thomsen teaches wherein the secure link operates according to a communication protocol **(col. 1, lines 50-67)**.

Regarding claim 16, Thomsen teaches wherein the secure link is established as inter-processes communication, when the intrusion detection module is integrated within the wireless node **(col. 8, lines 18-50)**.

Regarding claim 18, Thomsen teaches wherein the intrusion detection module comprises: a first receiving unit for receiving the copy of the outgoing data frames; an antenna for capturing the incoming traffic carried on all transmission channels allocated to the wireless node; a second receiving unit for detecting the incoming data frames from the incoming traffic; and a data processing unit for correlating the copy of the outgoing data frames with the incoming data frames and generating an impersonation detected signal **(col. 10, lines 50-67, col. 11, lines 1-33)**.

Regarding claim 19, Thomsen teaches wherein the intrusion detection module further comprises means for qualifying an intrusion attack based on the a impersonation detected signal **(col. 10, lines 50-67, col. 11, lines 1-33)**.

Regarding claims 15 and 20, Thomsen teaches wherein the wireless network operates according to any wireless network technology **(abstract)**.

Conclusion


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David G. Cervetti whose telephone number is (571)272-5861. The examiner can normally be reached on Monday-Tuesday and Thursday-Friday.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on (571)272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DGC

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4,20,07